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ABSTRACT

This report focuses on predicting the various physical impacts that proposed magnet school programs will have on potential magnet school sites in Providence, Rhode Island. Included are brief descriptions of the secondary schools in Providence being considered for the magnet programs and a listing of prevailing standards and building regulations which govern renovation and alteration to existing structures. The curriculum outline for each of three proposed magnet programs (health, business careers, and law and government) is translated into spatial requirements for two of the schools described. A listing of program activities for each curriculum outline is used as the basis for analyzing the projected demand and utilization of these facilities over a four year period. Taken into account are the special needs and additional requirements of each magnet program. (EB)

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Neutral Site Planning Project

Vol. IV

Facilities Analysis

City of Providence, Department of Public Schools

University of Rhode Island
Community Planning and Area Development, Urban Field Center

UD019905

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FINAL REPORT
VOLUME IV

FACILITIES ANALYSIS

A PLAN FOR A NEUTRAL SCHOOL THAT IS LOCATED SO AS TO BE ACCESSIBLE TO SUBSTANTIAL NUMBERS OF STUDENTS FROM DIFFERENT RACIAL AND ETHNIC BACKGROUNDS.

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AUGUST 30, 1978

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FOREWORD

This report is the fourth of four volumes prepared by the Providence School Department and CPAD Urban Field Center, University of Rhode Island, to meet their contractual obligations with the Office of Education, Department of Health, Education and Welfare. Funded by an ESAA grant, this report documents the planning process, findings, and support data of the Neutral Site Planning Project in Providence, Rhode Island.

The goals of the Project are:

To plan a neutral site magnet school that is located so as to be accessible to substantial numbers of students of different racial and ethnic backgrounds;

To plan a neutral site magnet school with a special curriculum which is a course of study embracing subject matter or a teaching methodology not generally offered to students of the same age or grade level, and in the ame local educational agency, as the students to whom the special curriculum is offered.

In order to meet these goals, four principal objectives were undertaken:

Objective A: To conduct surveys and studies to determine the location of the school.

Objective B: To plan an educational program for the proposed neutral site school.

Objective C: To develop architectural plans and designs for the facilities to house the proposed neutral school sites.

Objective D: To carry out repairs and minor remodeling for the proposed neutral site school.

Volume I is the Neutral Site Plan, and details the activities in Objectives A and B. Volume II contains a series of twenty-four neighborhood profiles, and meets the remaining mandates of Objective A. Volume III is the curriculum package which responds to Objective B, and includes the design of the four proposed magnet programs. Volume IV is the facilities analysis report, and translates curriculum design into spacial utilization patterns.

The four volumes together stand as an action plan for the development of neutral site magnet programs in Providence, Rhode Island.

INTRODUCTION

The purpose of this volume is to present the facilities analysis of The Candidate Neutral Site Schools. The study phases included an inventory of present school sites, an assessment of these according to an established set of criteria based upon the mandate and goals of The Project; and the development of architectual specifications for the selected facilities based upon the selected curriculum programs.

The purpose of this volume is to present the facilities analysis for the Neutral Site Planning Project. This study focuses on predicting the various physical impacts of magnet curricula implementation. This volume deals with the magnet programs which have been targeted for Mount Pleasant High School and Central High School. The neutral site school in arts, which is to be housed at Hope High School, has not been included in this report; however, the methodologies can be adopted for subsequent study of that program.

In many respects, this report is a compilation of materials that have been produced and previously submitted as elements of the original scope of consultant services dated December 8,1977. These individual reports, however, will be of more use in the future if they are packaged as one document. To this end, this report has been organized into four basic sections, each of which constitute fulfillment of the original tasks that were to be undertaken by the consultant. These topic areas can be defined as follows:

1. Review of existing materials concerning the nature and condition of educational facilities.

2. Inventory of code requirements which could impact the renovation or conversion of facilities.

3. Definition of basic spatial criteria as derived from standards and operational facilities.

4. Translation of curriculum outlines into spatial requirements.

This volume is the work of David Smith Winsor, AIA, Educational Architect under the surpervision of Barbara Brauner Berns, Research Director, Neutral Site Planning Project and submitted to the Superintendent of Schools for approval. Mr. Winsor collaborated on the specifications with Ms. Bette Finn and Mr. John Samek.

REVIEW OF EXISTING MATERIALS CONCERNING THE NATURE AND CONDITION OF EDUCATIONAL FACILITIES.

A review of materials provided by the school department revealed two documents which, in general terms, provided descriptions of the five structures presently under consideration as potential sites for the magnet program. The first document, AA Study of the School Building Needs of Providence, Vol. I," by Stanton Leggett and Associates describes the physical conditions within each school structure, highlighting potential deficiencies as observed during a city wide survey conducted during 1974. Relevant excerpts from that study have been included in this report. The second document, "Rhode Island School Building Facility Inventory" provides a variety of statistical information concerning the age and spatial utilization of all school buildings in the city. Those sections relating to secondary schools have been included in this report. Furthermore, in anticipation that some modifications to existing space will ultimately be necessary to effectively accommodate the planned educational programs, a listing of prevailing standards and building regulations which govern renovation and alteration to existing structures has been prepared and included in this report.

CANDIDATE STRUCTURES

A preliminary assumption, in the search for an approriate site for the magnet program, was the designation of the five existing secondary schools as potential sites. This decision, of course, can be broadened to include other public or private facilities should the initial sites prove to be unsatisfactory.

I. Central High School
II. Central Vocational School
III. Classical High School
IV. Hope High School
V. Mount Pleasant High School

Tthe Leggett report, Vol.I., concluded that these five facilities had a combined capacity of 6630 students. Present enrollment data was not complete at the time of this writing, however, it is estimated to be approximately 5600 students resulting in a surplus capacity of 1000 students. The Leggett report also made a number of specific references to the physical conditions within the five structures which are summarized as follows:

Central High - Built in 1923, renovated in 1968. The school design and layout is described as being typical of the period. The existing auditorium was singled out as potentially convertable to a different use, possibly media or resourse center. The area of the auditorium is 14,268 square feet. While not a vocational school in the strict sense, Central has traditionally emphasized vocational curricula in business and various trades.

Central Vocational - A state owned, city operated facility built in 1968. Described as a popular vocational program, attracting students from all sections of the city and, as a result, is operating at near capacity with a waiting list for some of the program offerings.

Classical High - Constructed in 1968 as a replacement for the original school building. Possesses a variety of technical problems ranging from poor ventilation to susceptibility to vandalism. The Leggett report mentioned that a number of spaces were under utilized and might be considered for conversion to a more needed activity. These included the television studio (suggested for possible inclusion in the Central Vocational Program), six resource areas, excessively sophisticated science facilities and an underused music suite which was described as superior but going to waste.

Hope High - Constructed in 1938, generally characterized as run down and in neglected condition. The science facilities, industrial arts and home economics spaces were described as old fashioned with obsolete or inoperative equipment. An attempt had been made at one time to refurbish an existing space for an art gallery; however, it was found that the space could not comply with building code requirements and could not be used for that purpose.

Mount Pleasant High - Constructed in 1938, the building underwent renovations in 1975 but continued vandalism has left the interior in poor condition. While the building has an excess enrollment, the Leggett survey recommended extensive repairs and upgrading of inoperative equipment.

In some instances, it is expected that conditions as described in the Leggett study may have changed with subsequent capital expenditures for major repairs and alterations. However, additional surveys to confirm present conditions and adaptability to new educational programs should not be undertaken until such time as the specific needs of the new programs are known. In addition, the vocabulary changes designed to compare the potential of five select facilities will naturally require substantially greater detail than was provided in the Leggett report.

INVENTORY OF CODE REQUIREMENTS

The attached list is provided as a reference for standards and codes which are applicable to the facilities requirements. These have been documented by title and source only, in that a full reprint of the entire texts would be impractical.

The extent of this list, however, points out the magnitude of governing controls which must be taken into consideration should extensive conversion or renovation of existing facilities be required.

PRELIMINARY LIST
APPLICABLE CODE REQUIREMENTS

*Rhode Island State Building Code

Article I Administration and Enforcement

section
110.0 modifications
106.0 existing structures
106.4 alterations under 50%
106.5 alterations under 25%

Article 2 Definitions and Classifications

section
203.5 use group A-4 structures
214.0 construction classification

Article 3 General Building Limitations

304.0 existing buildings
304.1.2 minor changes
316.0 modifications

Article 4 Special Use and Occupancy Requirements

417.0 places of public assembly
417.2.5 trim, finish and decorative hangings
417.2.6 existing buildings
417.9 lighting
418.0 public assembly other than theatre

Article 5 Light and Ventilation

502.0 standards of natural light
503.0 standards of natural ventilation
504.0 artificial light and ventiliation
505.0 existing buildings
505.2 alterations
506.0 natural lighting and ventilation of rooms
507.0 lighting and ventilation of special spaces
508.0 basements and cellars
510.0 assembly rooms
514.0 required fresh air supply

Artical 6 Means of Egress

604.0 existing buildings
606.0 occupancy load
607.0 types and location of exitways
608.0 capacity of exists
609.0 number of exitways
610.0 exitway access passageways and corridors

612.0 means of egress, doorways
616.0 interior exitway stairway
624.0 means of egress lighting

Article 9 Fire Resistive Consturction Requirements

902.0 fire hazard classification
903.4.2 labled fire doors
904.0 flame resistance tests
904.2 interior finish materials
905.0 special resistive requirements
905.7.3 basement assembly uses
920.5 interior finish

Article 12 Fire Protection Systems

1216.12 schools and child day care centers

Article 17 Plumbing, Drainage and Gass Piping

1706.0 existing buildings and installations

Article 18 Air Conditioning, Refrigeration and Mechanical Ventilation

1805.0 existing buildings and installations

*Rhode Island State Fire Safety Code

Chapter 29.12 Schools
Part II Existing School Buildings
23-28.12.22 sprinkler requirements
23.28.12.28 exits
23-28.12.30 doors
23-28.12.37 exit signs
23-28.12.38 emergency lighting

*State Department of Education

Standards for approval and accreditation of secondary schools in Rhode Island

Section II Standards for Approval
School plant
Section III Standards (School Plant)
Instructional areas
1. academic classrooms-minimum area

DEFINITION OF BASIC SPATIAL CRITERIA

In compliance with the requirement for criteria development, a number of reference sources have been cited as standards for establishing the basic spartial requirements of various program activities. While the list is limited in scope it is the foundation for most of the detailed spatial analysis which take place later in this report. Two principal sources are used, the standards of the Rhode Island Department of Education and Average Unit Space criteria developed from sample "Ed. Spec." by the consultant.

State Department of Education

Minimum standards for secondary schools

Physical Plant:

1. Academic Classrooms

   Max. 30 pupils, min. 700 s.f. - resulting in a unit area of 23.22 s.f. per student.

2. Laboratory Classrooms

   Max 30 pupils, min 1200 s.f. - resulting in a unit area of 40 s.f. per student.

Reference Standards - compiled by the consultant

1. Interchangeable Classrooms

   (English, language, mathematics, social studies, public speaking) 750 to 800 s.f. with 25 to 30 students or 28 s.f./pupil.

2. Special Classroom

   (Pupils with learning disabilities)
   850 s.f./max of 19 students = 4[illegible] s.f./students

3. Supplementary Educational Spaces

   lecture room - 100 pupils at 1600 s.f.
   remedial reading 400 s.f. for 10-15 students or 32 s.f./student.

4. Dark room 100 s.f.

5. Typing room 900 - 1000 s.f. with maximum of 30 students or 35 s.f. student.

6. Sciences

   labs 1100 s.f. @ 24 students max or 46 s.f./student

7. Business ed:

   Bookkeeping classroom 800 s.f. @ max 25 students shing or 32 s.f. per student.

   Office machine and practice room - 900 s.f. @ max of 25 students or 36 s.f. per student.

TRANSLATION OF CURRICULUM OUTLINE INTO SPATIAL REQUIREMENTS

As stated earlier, this section of the report deals with three of the four proposed magnet programs. Health, Business, Careers, and Law and Government. The analysis methodology, which is described in detail within the body of this section, consists of three parts:

A. Basic room types and physical characteristics

B. Utilization analysis - calculation of demand for various room types

C. Projection of spatial requirement - forcast of needs for a four year period starting with fall implementation of curricula.

Health Careers

Conversion of curriculum outline into definitive space requirements. The Health Careers program, targeted for Mount Pleasant High School, is expected to require a number of specialized features in its physical plant in order to simulate certain on-th-job conditions. For the pruposes of planning the demand and utilization of these facilities, several basic assumptions have been developed.

Statement of Assumptions:

A. Enrollment - The annual enrollment in the Health Careers Program has been stipulated by the Providence School Department as 150 students. While variations in this figure are possible, it has been assumed that the level of participation will remain constant over the next four years with 150 students entering the program at the ninth grade level each year.

B. Program Identity - It is generally agreed that it would be beneficial to the success of the magnet program in Health Careers if the curriculum were to be as independant as possible from the rest of the secondary program. The calculations of space requirements, however, are based on the assumption that certain courses would not be directly operated or governed by the Magnate Program, particularly those that would be universal to secondary level education. For this reason, the spatial requirements for courses such as English, Math, Social Studies and Physical Education have not been developed.

Program Requirements

The development of spatial requirements incorporate three levels of analysis which lead to the ultimate estimation of room requirements.

1. General analysis of program activities

A general survey of all program activities has been conducted to determine the basic characteristic of the instructional spaces in which they are to be housed. The attached list, covering most of the courses offered in the curriculum outline, tabulates each course, the general type of space which is appropriate for that use, and the areas of condentration which include that course in their respective curricula. Where possible, detailed descriptions of the space with any identifiable equipment or design consideration, have been developed.

2. Level of Utilization

The next step in the process involves the analysis of the utilization of each type of space, given that it is expected to be available for use for a set number of periods per week. This portion of the study also focuses attention on the changes which could occur in the demand for a particular type of space during the first three or four years that the program is being implemented.

3. Summary of Space Requirements

The last section of the analysis is a summary which graphically displays the requirements for the different types of instructional space that have been identified in the first portion of the report.

GRAM OF SPATIAL REQUIREMENTS

SICAL/FUNCTIONAL CRITERIA

RICULUM OR NET THEME	FUNCTION-SPECIFIC	GROUP SIZE	UNIT AREA	TOTAL AREA	SPECIALIZED REQUIREMENTS	SPACE PRESENTLY AVAILABLE
1. Foundation Health and Anatomy						
	A. Simulated Medical Lab Enviroment	15	50	750		
	B. Simulated Hospital Room Enviroment	15	35	525		
	D. Medical Terminology Class Room	30	30	900		
	E. Remedial Reading	30-15				
		5-8	32	400		
	C. Biology Laboratory	25	46	1150		
2. Career Explorations						
	F. Auditorium	150			Audio-visual	
	D. Cluster Discussion Spaces	25			Audio-visual	
	D. Health Careers Seminar	12-15			Audio-visual	
3. Indirect Patient Care Practicum						
	A. Simulated Medical Laboratory Prep. Room Medical Technology	15	50	750		
	C. Chem./Bio. Lab Prep. Room	25	46	1150		
4. Visual Explorations in Science						
	- Science Lab	25	46	1150		
	- Dark Room	5	20	100		

OGRAM OF SPATIAL REQUIREMENTS

YSICAL/FUNCTIONAL CRITERIA

RRICULUM OR GNED THEME	FUNCTION-SPECIFIC	GROUP SIZE	UNIT AREA	TOTAL AREA	SPECIALIZED REQUIREMENTS	SPACE PRESENTLY AVAILABLE
5. Direct Patient Care Practicum						
	D. Interchangeable Classroom	25	30	900		
	- Simulated Hospital Room	10-15	35	525		
6. Careers I						
	A. Medical Interchangeable Class Room	30	30	900		
	B. Dental Interchangeable Class Room	30	30	900		
	C. Health Services Interchangeable Class Room	30	30			
7. Health Occupations Internshp.						
	A. Research Center	60				
	B. Seminar	15				
8. Advanced Science						
	- Laboratory/Class Room	20				
9. Administration						
	- Coordinator's Office	1	125			
	- Clerical	1	75			

A. Simulated Medical Lab/Instructional Area

This is a simulated medical laboratory enviroment consisting of a suite of three contiguous spaces; medical lab, preparation room, and reception room. Suite to be directly accessible to general instructional area.

Medical Lab:

Space to be used for both demonstration and laboratory practice. Suggest group size of 15 students; however, more expansive space can be provided to accommodate up to 24 students. Using this as a maximum load should provide 1200 square feet of usable area. This can be reduced if the majority of portable equipment storage is confined to the preparation room.

Additional Requirements:

- Central demonstration bench.
- Wardrobe for lab coats.
- Pupil work stations equiped with gas, water, and electric outles.
- Small chald board at one end of room (by passing type).
- 10 lineal feet of tack board.
- Fire extinguisher cabinet.
- Adequate ventilation/lighting.
- Refrigerated storage
- Preparation Room (250 square feet)

To be used for:

Foundation Health, Health-Inderect Patient

B. Direct Patient Care Instructional Area

This is a simulated hospital room enviromeat equipped and furnished so as to replicate same and is intended to be used for demonstration and practive of hospital care procedures. Recommended instructional group size is a maximum of 15 students with a unit area requirement of 35 square feet per student. Total of 525 square feet should be provided for this space.

Additional Requirements:

- Hospital equipment - Bed, Bed Table, Side Chair, etc.
- Fixed wall mounted equipment to simulate suction, oxygen, patient light.
- Sink.
- Door should be regulation width for moving equipment.
-Overhead lighting preferred.

To be used for:

Foundation Health, Direct Patient Care

C. General Science/Chem. , Bio., Laboratory

This is a required science instruction and demonstration laboratory to be used in conjunction with foundation health, medical technology and advanced science. Generally, the space must be furnished and equipped in the standard science room configuration using lab benches and demonstration tables. Space should accomodate 25 students with approximately 1150 square feet of usable floor space.

Additional Requirements:

- 12, 2 place pupil tables.
- Provide gas, water and electrical outlets.
- Raisable chalk board located on front wall.
- Tack board - 20 lineal feet.
- Peg board.
- Motion picture screen.
- Black out shades.
- Adequate lighting.
- Science lab preparation room.

D. Interchangeable Classroom (Classroom Unit, Description)

Requirement for standard instructional space that is possibly of interchangeable nature. No specialized equipment is foreseen with the exception that tables and chairs are preferred over ordinary desks. Space should be capable of accommodating 25-30 students with 800 square feet of usable floor space.

Additional Requirements:

- Chalkboard located along front and side of room.
- Minimum of 18-24 lineal feet of tack board.
- Chart rail above chalk board
- Combination wardrobe and supply closet.
- Adjustable book shelves.
- Teacher's desk and chair.
- Filing cabinet.
- Peg board display area.
- Storage for large objects such as charts and displays.
- Program clock, fire alarm, and combination public address intercom sys.
- Ceiling hung motion picture screen.
- Conduit/connection for closed circuit television.
- Duplex electrical outlets on front and rear walls.
- Duplex electrical outlets on front and rear walls.
- Black out shades.
- Minimum light level 25 F.L.

To be used for:

Foundation Health, Direct Patient Care, Careers I.

E. Remedial Reading

Program to augment reading skills of student participating in Medical Terminology Program. Small group instruction desired with students using a large table rather than desks and chairs. Expected load of 5-8 students with suggested maximum of 10-15 students. Minimum of 400 square feet of usable floor space required. Should be located near the general instructional space used for Medical Terminology Program.

Additional Requirements:

- Chalk board on 2 sides of room.
- Minimum 12 lineal feet of tack board.
- Adjustable shelving.
- Closet and file storage.
- Teacher's desk and chair.
- High degree of sound isolation.
- Reading machine.
- Viewing screen (tilted?)

To be used for:

Foundation Health

F. Large Group Meeting Area

Requirement is for a group meeting area capable of accomodating an entire class of at least 150 students. Area to be used for presentations and lectures. Expected space required, 3000 square feet. However, utilization to be infrequent.

Additional Requirements:

- Motion Picture Screen.
- Auditorium seating or movable chairs.
- Black out capability.
- P.A., if necessary.

INVENTORY OF FACILITY REQUIREMENTS

PACE CODE	SPACE	GRADE	SECTIONS	FREQUENCY CLASSROOM UNITS C.U.'s	# OF SPACES REQUIRED
(A.)	SIMULATED MEDICAL LABORATORY				
	Foundation Health & Anatomy	9th (1st Semester)	5 @	1 hr./week = 5 cu; 12 hr/wk =	.4
	Foundation Health & Anatomy	9th (2nd Semestre)	5 @	1 hr./week = 5 cu; 12 hr/wk =	.4
	Indirect Patient Care Practicum	10th (1st Semester)	10 @	2 hr./week =20 cu; 30 hr/wk =	.7
	Indirect Patient Care Practicum	10th (2nd Semester)	10 @	2 hr./week =20 cu; 30 hr/wk =	.7
(B.)	SIMULATED HOSPITAL ROOM				
	Intro To Health & Biology	9th (1st Semester)	5 @	1 hr./week = 5 cu; 12 hr/wk =	.4
	Intro To Health & Biology	9 th (2nd Semester)	5 @	1 hr./week = 5 cu; 12 hr/wk =	.4
	Direct Patient Care Practicum	11th (1st Semester)	10 @	2 hr./week =20 cu; 30 hr/wk =	.7

HEALTH PROFESSIONS

INVENTORY OF FACILITY REQUIREMENTS

UTILIZATION

SPACE CODE	SPACE	GRADE	# OF SECTIONS	FREQUENCY	CLASSROOM UNITS C.U.'s	# OF SPACES REQUIRED
(C.)	CHEM/.BIO./ SCIENCE LAB					
	Foundation Health & Anatomy	9th (1st Semester)	6 @	5 hrs/wk =	30 cu : 12 hr/wk =	2.5
	Foundation Health & Anatomy	9th (2nd Semester)	6 @	5 hrs/wk =	30 cu: 12 hr/wk =	2.5
	Indirect Patient Care Practicum	10th (1st Semester)	6 @	4 hrs/wk =	24 cu : 30 hr/wk =	.8
	Indirect Patient Care Practicum	10th (2nd Semester)	6 @	4 hrs/wk =	24 cu : 30 hr/wk =	.8
	Visual Explorations	10th (1st Semester)	6 @	2 hrs/wk =	12 cu : 30 hr/wk =	.4
	Visual Explorations	10th (2nd Semester)	6 @	2 hrs/wk =	12 cu : 30 hr/wk =	.4
	Advanced Science	12th (1st Semester)	1 @	9 hrs/wk =	9 cu : 30 hr/wk =	.3
	Advanced Science	12th (2nd Semester)	1 @	9 hrs/wk =	9 cu : 30 hr/wk =	.3

HEALTH PROFESSIONS

INVENTORY OF FACILITY REQUIREMENTS

UTILIZATION

SPACE CODE	SPACE	GRADE	# OF SECTIONS	FREQUENCY	CLASSROOM UNITS C.U.'s	# OF SPACES REQUIRED
(D.)	INTERCHANGEABLE CLASSROOM					
	Direct Patient Care (Foundations)	9th (Both Semesters)	5 @	1 hr/wk =	5 cu : 12 hr/wk =	.4
	Indirect Patient Care	9th (Both Semesters)	5 @	1 hr/wk =	5 cu : 12 hr/wk =	.4
	Medical Terminology	9th (Both Semesters)	5 @	1 hr/wk =	5 cu : 12 hr/wk =	.4
	Health Careers Seminar	9th (Both Semesters)	6 @	2 hrs/wk =	12 cu : 12 hr/wk =	1.0
	Career Exploration Discussion Group	9th (Both Semesters)	6 @	2 hrs/wk =	12 cu : 12 hr/wk =	1.0
	Direct Patient Care Practicum	11th (1st Semester)	6 @	6 hrs/wk =	36 cu : 30 hr/wk =	1.2
	Careers I	11th (1st Semester)	4 @	6 hrs/wk =	24 cu : 30 hr/wk =	.8
	Senior Seminar	12th (Both Semesters)	10 @	3 hrs./wk =	30 cu : 30 hr/wk =	1.0
(E.)	READING LAB					
	Remedial Reading	9th (Both Semesters)	4 @	1 hr/wk =	4 cu : 30 hr/wk =	.2

UTILIZATION PLAN

SPACE DESCRIPTION	FIRST YEAR 78-79		SECOND YEAR 79-80		THIRD YEAR 80-81		FOURTH YEAR & BEYOND	
	FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
Simulated Lab 9th	.3	.3	.3	.3	.3	.3	.3	.3
Simulated Lab 10th	0	0	.7	.7	.7	.7	.7	.7
Simulated Lab 11th	0	0	0	0	0	0	0	0
Simulated Lab 12th	0	0	0	0	0	0	0	0
TOTAL	.3	.3	1.0	1.0	1.0	1.0	1.0	1.0
Simulated Medical Lab	1 space	1 space	1 space	1 space	1 space	1 space	1 space	1 space
Hospital Room 9th	.3	.3	.3	.3	.3	.3	.3	.3
Hospital Room 10th	0	0	0	0	0	0	0	0
Hospital Room 11th	0	0	0	0	.7	0	.7	0
Hospital Room 12th	0	0	0	0	0	0	0	0
TOTAL	.3	.3	.3	.3	1.0	.3	1.0	.3
Simulated Hospital Lab	1 space	1 space	1 space	1 space	1 space	1 space	1 space	1 space
Science Lab 9th	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Science Lab 10th	0	0	1.2	1.2	1.2	1.2	1.2	1.2
Science Lab 11th	0	0	0	0	0	0	0	0
Science Lab 12th	0	0	0	0	0	0	.3	.3
TOTAL	2.5	2.5	3.7	3.7	3.7	3.7	4.0	4.0
Science Lab	3 spaces	3 spaces	4 spaces	4 spaces	4 spaces	4 spaces	4 spaces	4 spaces

UTILIZATION PLAN

-Page 2-

	FIRST YEAR 78-79		SECOND YEAR 79-80		THIRD YEAR 80-81		FOURTH YEAR & BEYOND	
SPACE DESCRIPTION	FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
Interchangeable Room -9th	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Interchangeable Room-10th	0	0	0	0	0	0	0	0
Interchangeable Room-11th	0	0	0	0	1.2	.8	1.2	.8
Interchangeable Room-12th	0	0	0	0	0	0	1.0	1.0
TOTAL	2.3	2.3	2.3	2.3	3.5	3.1	4.5	4.1
Interchangeable Class Room	3 spaces	3 spaces	3 spaces	3 spaces	4 spaces	4 spaces	5 spaces	5 spaces

Summary of Space Requirements Health Careers

The preceding analysis has indicated the projected need for six different types of instructional space:

Simulated Medical Laboratory
Simulated Hospital Room
General Science Lab
Interchangeable Classroom
Reading Lab
Assembly Space

From the summary utilization plan, it can be seen that the level of demand for these spaces is definitely expected to fluctuate over time as the program recruits additional students.

Simulated Medical Lab. - Depending on final scheduling plans, the analysis indicates that the simulated medical lab, while required at the outset of the programs implementation, will be under-utilized for the first year of operation. Succeeding years will see a heavier demand for the lab which could possibly exceed the capacity of one lab unit. It is recommended, therefore, that a careful analysis of class scheduling be conducted to verify the adequacy of the laboratory over the next four years.

Simulated Hospital Room - The projections also show that simulated hospital room will be vacant at least half of the time except for increases in utilization that will take place during the fall semester. The high vacancy rate could be used to advantage by reducing the group size which would result in more class sections. The net effect of this would be to balance the overall demand for this space.

General Science Lab. - The utilization of this space was analyzed simply to predict the total need for science rooms that would be generated by the Health Careers Program. There is certainly no intention of creating science labs for the magnet program but rather to determine if the existing science labs, located throughout the school, can handle the level of demand which could ultimately reach 4 spaces.

Interchangeable Classroom - The largest requirement, as illustrated by the utilization plan, is for interchangeable classrooms. Depending on actual enrollment, there could be a need for as many as three or four of these rooms during the first semester of operation.

Reading Lab. - The analysis indicates that there is only a "part time" requirement for reading lab facilities and, as a result, the remedial reading program will, in all likelihood, be accommodated in some existing space currently used by the general secondary program.

Assembly Space - Like the reading lab, the requirement for a large group assembly space is of a part time nature. There are, however, a number of alternatives that could be considered. First, the school auditorium or cafeteria could be used for this purpose on a scheduled basis. Secondly, if an area of sufficient size is made available to the magnet program, there would be the possibility that the space could be used in a multi-purpose capacity with provision for subdivision into the required number of interchangeable classrooms when needed.

Additional Requirement - It is also foreseen that there will be a need for some administrative offices presumably connected to or nearby the instructional spaces that are operated by the Health Careers Program. The exact requirements for this area are not yet known.

Business Careers

Conversion of the curriculum outline into definitive space requirements is necessary. The diverse array of program options has made the projection of spatial requirements somewhat difficult in that there is understandable uncertainty as to the projected level of participation within each area of concentration. Therefore, in order to develop a working model of room types and their utilization, a number of fundamental assumptions have been included as basic criteria for projecting enrollment and program preferences.

Statement of assumptions:

A. Program preference - Five basic areas of program options or concentration have been identified by the Providence School Department. These are accounting and management, banking and finance, computer science, marketing, and secretarial science. For the purposes of projecting the level of demand for instructional space, it has been assumed that the total student enrollment in the Business Careers Program will be equally divided between the five areas for a distribution of 20% in each area.

B. Enrollment expansion - There is a strong likelihood that the business program will attract increasing interest in the various career tracts, and allowances have been made for the inevitable expansion of the program's total enrollment. The entering enrollment has been established as 75 students. As these students pass to the 10th grade level, it has been assumed that they will be joined by 25 additional students who could transfer from other segments of the secondary program thereby raising the 10th grade enrollment to 100. It has also been assumed that there will be a need to expand the capacity of the 9th grade program during the second year of operation. Estimates of this growth in demand could be as much as a 100% increase. However, for the purposes of this

analysis, the growth rate has been stipulated as 50% resulting in 100 9th grade students during the second year of operation and 150 students during the third year of operation. All of these estimates are, of course, extremely premature and could vary drastically. The purpose of this analysis, however, is not to predict exact capacities but rather to create a basis for evaluation of the existing facilities and their ability to accommodate a variety of possible levels of student participation in the business careers program.

C. Program Identity - The issue of program identity is still unresolved since the physical constraints of the facility are of extreme importance in determining the feasibility of establishing a magnet program which is, to the greatest extent possible, autonomous. For the purposes of this analysis, the optimum condition of maintaining a cohesive group throughout all levels of the curriculum has been assumed. This requires that all course offerings with the exception of science and physical education will be taught within spaces under the operative control of the magnet program and by instructions directly affiliated with the magnet program. Should this assumption impose irreconcileable spatial requirements, it will be necessary to selectively relocate certain general secondary course offerings from the magnet area to other existing spaces.

D. Room Types - In order to sustain a high level of flexibility in the planning of room utilization, a minimum number of classroom variations has been assumed. The greatest demand is expected to be for universal instructional space that is capable of serving the most elements of the planned curriculum through a variety of equipment schedules. This space is described in this analysis as an interchangeable classroom for business instruction. The second distinct requirement is for typing classrooms. While these spaces have some other uses besides typing instructions, the existence of equipment, furnishings and layout normally make them unsuitable for most other course offerings. By the same token, the physical dictates of typing instruction necessitate a larger than normal space with equipment and services that are incompatible with general instruction. Additional specialized requirements have been identified in association with the marketing and computer science. First, an eventual need is seen for practical training on data processing equipment; however, there are a number of possible options, including the use of existing facilities at Central Vocational, that must be explored. Secondly, it is expected that a retailing laboratory (school store)

will be established. Long range requirements also include an office simulation for the secretarial science program. In that the detailed requirements of these additional specialized spaces are inconclusive, physical descriptions have not, as yet, been generated.

Program Requirements

The development of spatial requirements incorporate three levels of analysis which lead to the ultimate estimation of room requirements.

1. General analysis of program activities.

   A general survey of all program activities has been conducted to determine the basic characteristic of the instructional spaces in which they are to be housed. The attached list, covering most of the courses offered in the curriculum outline, tabulates each course, the general type of space which is appropriate for that use, and the areas of concentration which include that course in their respective curricula. Where possible, detailed descriptions of the space, with any identifiable equipment or design considerations, have been developed.

2. Level of utilization.

   The next step in the process involves the analysis of the utilization of each type of space, given that it is expected to be available for use for a set number of periods per week. This portion of the study also focuses attention on the changes which could occur in the demand for a particular type of space during the first three or four years that the program is being implemented.

3. Summary of space requirements.

   The last section of the analysis is a summary which graphically displays the requirements for the different types of instructional space that have been identified in the first portion of the report.

ROOM TYPE - SUMMARY
9th GRADE

Course	Space	Enrollment
Typing I	Typing room	All Concentrations
(1 semester) Exploratory Program in Business	Interchangeable Classroom	All Concentrations
Social Studies	Interchangeable Classroom	All Concentrations
(1 semester) Elective	Interchangeable Classroom	All Concentrations

ROOM TYPE - SUMMARY
10th GRADE

Typing I	Typing room	
Typing II	Typing room	
Introduction to Accounting	Interchangeable Classroom	
Career Education Seminar		All Concentrations
Elective		All Concentrations
Business Organiz. & Management (1 semester)	Interchangeable Classroom	
Banking Institutions	Interchangeable Classroom	
Introduction to Data/Computer Processing		
Principles of Marketing	Interchangeable Classroom	
Shorthand I	Interchangeable Classroom	
Elective	Interchangeable Classroom	

ROOM TYPE - SUMMARY
11th GRADE

Course	Space	Enrollment
Math of Business	Interchangeable Classroom	All Concentrations except computer science and banking
Elective	Interchangeable Classroom	Accounting, Management and secretarial science only
Accounting	Interchangeable Classroom	Accounting & Management concentrations only
Accounting for Management (accounting only)	Interchangeable Classroom	Accounting concentration only
Business Law	Interchangeable Classroom	Accounting/Management banking & finance marketing
Career Education Seminar	Interchangeable Classroom	All Concentrations
Introduction to Management	Interchangeable Classroom	Management concentration only
Math of Finance	Interchangeable Classroom	Banking & Finance only
Financial Operations	Interchangeable Classroom	Banking & Finance only
Banking Management	Interchangeable Classroom	Banking & Finance only
Principles of Economics I & II	Interchangeable Classroom	Banking & Finance
Mathematics of Computer Science	Interchangeable Classroom	Computer Science only
Computer Programming	Computer Lab (Central Voc.)	Computer Science only
Computer Workshop	Computer Lab (Central Voc.)	Computer Science only
Systems Control		Computer Science only

11th Grade (Cont'd)

Course	Space	Enrollment
Introduction to Systems Analysis		Computer Science only
Advertising & Sales	Interchangeable Classroom	Marketing (all three options)
Business Organization & Management	Interchangeable Classroom	Marketing (all three options)
Consumerism (consumer behavior)	Interchangeable Classroom	Marketing (all three options)
Business English	Interchangeable Classroom	Secretarial Science only (all three options)
Shorthand & Transcription	Interchangeable Classroom	Secretarial Science only (and office admin. options)
Work Processing	Typing room	Secretarial Science (and office admin. options only)
Office Systems and Procedures	Interchangeable Classroom	Secretarial Science (office assistant option only)
Typing III	Typing room	Secretarial Science (office assistant option only)
ROOM TYPE - SUMMARY 12th GRADE		
Accounting Problems	Interchangeable Classroom	Accounting Concentration (high school, junior college level only)
Advanced Accounting	Interchangeable Classroom	Accounting Concentration (4 year college level only)
Introduction to Data Processing	Computer Lab (Central Voc.)	Accounting & Banking/ finance concentration (all levels)
Understanding Taxes	Interchangeable Classroom	Accounting Concentration (all levels)

12th GRADE (Cont'd)

Course	Space	Enrollment
Principles of Economics	Interchangeable Classroom	Accounting/Management & marketing concentrations
Psychology	Interchangeable Classroom	Accounting/Management concentrations
Seminar	Interchangeable Classroom	Accounting, Banking, finance, computer science, & market management
Small Business Management	Interchangeable Classroom	Management Concentration
Management Decision Making	Interchangeable Classroom	Management Concentration
Business Organization & Management	Interchangeable Classroom	Management Concentration
Money & Banking	Interchangeable Classroom	Banking & Finance (all levels)
Principles of Investment	Interchangeable Classroom	Banking & Finance (all levels)
Mortgages & Loans	Interchangeable Classroom	Banking & Finance
Commodities & Securities	Interchangeable Classroom	Banking & Finance
Computer Programming	Computer Lab (Central Voc.)	Computer Science
Computer Workshop	Computer Lab (Central Voc.)	Computer Science
Management Technology	Interchangeable Classroom	Computer Science
Retail Management	Interchangeable Classroom	Marketing (Sales Option) all levels
Institutional Management	Interchangeable Classroom	Marketing (Sales Option) all levels

12th GRADE (Cont'd)

Course	Space	Enrollment
Marketing Strategies	Interchangeable Classroom	Marketing (all options) all levels
Principles of Insurance	Interchangeable Classroom	Marketing (insurance option)
Small Business Management (insurance)	Interchangeable Classroom	Marketing (insurance option)

A. Interchangeable Classroom - Business Instruction.

Requirement for a standard instruction space that is equipped with separate desks and chairs that can be arranged to accommodate a variety of teaching situations. To be used as a universal business instructional space with capacity of 25 students and a net usable area of 800 square feet.

Additional Requirements:

- Chalkboard located along front and side of room.
- Minimum of 18-24 lineal feet of the tack board chart rail above chalkboard.
- Combination wardrobe and supply chest.
- Adjustable book shelves.
- Teacher's desk and chair.
- Filing cabinets.
- Peg board display area.
- Storage for large objects, such as charts and displays.
- Program clock, fire alarm, and combination public address intercom system.
- Ceiling hung motion picture screen.
- Conduit/connection for closed circuit television.
- Duplex electrical outlets on front and rear walls.
- Black out shades.
- Minimum light level of 30 F.C.

To be used for: 9th and 10th grade level courses, i.e., exploratory program in business, social studies, introduction to accounting, business organization and management, banking institutions, and principles of marketing.

B. Typing Room - Space Description.

Requirement for typing instructional space equipped and serviced so as to offer the greatest degree of flexibility for future use in the secretarial skills program, i.e., possible utilization in an office simulation capacity. The room should accommodate a maximum of 30 students with a net usable area of 950 - 1000 square feet.

Additional Requirements:

- Provide floor type electrical outlets.
- Work sink and counter.
- Electrical "plug-in strip" along walls and work counters.
- Chalkboard on front wall with raisable sections.
- Tack board on side and rear walls.
- High level artificial lighting.
- Adjacent storage room.
- Storage cabinets and files.
- Sound proofing and accoustical treatment.
- Fire alarm, program clock and integrated P.A./intercom.
- Teacher's work station (desk and chair).

ROOM TYPE/USE	COURSE	GRADE	# OF SECTIONS	FREQUENCY OF USE	AVAILABILITY	OCCUPANCY FACTOR
(A.)	INTERCHANGEABLE CLASSROOM					
	Exploratory Program in Business	9th (1st Semester)	@75 3@	4 per/wk =	12 c.u. ÷ 30 per/wk =	.4
			@100 4@	4 per/wk =	16 c.u. ÷ 30 per/wk =	.5
			@150 6@	4 per/wk =	24 c.u. ÷ 30 per/wk =	.8
	Elective	9th (2nd Semester)	@75 3@	4 per/wk =	12 c.u. ÷ 30 per/wk =	.4
			@100 4@	4 per/wk =	16 c.u. ÷ 30 per/wk =	.5
			@150 6@	4 per/wk =	24 c.u. ÷ 30 per/wk =	.8
	Social Studies	9th (Both Semesters)	@75 3@	4 per/wk =	12 c.u. ÷ 30 per/wk =	.4
			@100 4@	4 per/wk =	16 c.u. ÷ 30 per/wk =	.5

BUSINESS CAREERS

ROOM TYPE/USE	COURSE	GRADE	# OF SECTIONS	FREQUENCY OF USE	AVAILABILITY	OCCUPANCY FACTOR
			@150 6@	4 per/wk =	24 c.u. ÷ 30 per/wk =	.8
	English	9th (Both Semesters)	@75 3@	5 per/wk =	15 c.u. ÷ 30 per/wk =	.5
			@100 4@	5 per/wk =	20 c.u. ÷ 30 per/wk =	.7
			@150 6@	5 per/wk =	30 c.u. ÷ 30 per/wk =	1.0
	Math	9th (Both Semesters)	@75 2@	5 per/wk =	10 c.u. ÷ 30 per/wk =	.3
			@100 3@	5 per/wk =	15 c.u. ÷ 30 per/wk =	.5
			@150 4@	5 per/wk =	20 c.u. ÷ 30 per/wk =	.7
	Algebra I	9th (Both Semesters)	@75 1@	5 per/wk =	5 c.u. ÷ 30 per/wk =	.2
			@100 1@	5 per/wk =	5 c.u. ÷ 30 per/wk =	.2

ROOM TYPE/USE	COURSE	GRADE	# OF SECTIONS	FREQUENCY OF USE	AVAILABILITY	OCCUPANCY FACTOR
			@150 2@	5 per/wk =	10 c.u. ÷ 30 per/wk =	.3
	Introduction to Accounting	10th (Both Semesters)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
	Career Education Seminar	10th (1st Semester)	6@	2 per/wk =	12 c.u. ÷ 30 per/wk =	.4
	Elective	10th (2nd Semester)	4@	2 per/wk =	8 c.u. ÷ 30 per/wk =	.3
	English	10th (1st Semester)	4@	5 per/wk =	20 c.u. ÷ 30 per/wk =	.7
	English	10th (2nd Semester)	4@	5 per/wk =	20 c.u. ÷ 30 per/wk =	.7
	Math	10th (Both Semesters)	2@	5 per/wk =	10 c.u. ÷ 30 per/wk =	.3
	Algebra II	10th (Both Semesters)	2@	5 per/wk =	10 c.u. ÷ 30 per/wk =	.3
	Business Organization & Management	10th (1st Semester)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1

BUSINESS CAREERS

ROOM TYPE/USE	COURSE	GRADE	# OF SECTIONS	FREQUENCY OF USE	AVAILABILITY	OCCUPANCY FACTOR
	Banking Institutions	10th (2nd Semester)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
	Principles of Marketing	10th (Both Semesters)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
	Social Studies	10th (Both Semesters)	4@	3 per/wk =	12 c.u. ÷ 30 per/wk =	.4
	Shorthand I	10th (Both Semesters)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
	Math of Business	11th (Both Semesters)	3@	5 per/wk =	15 c.u. ÷ 30 per/wk =	.5
	English	11th (Both Semesters)	4@	5 per/wk -	20 c.u. ÷ 30 per/wk =	.7
	Elective	11th (Both Semesters)	4@	4 per/wk =	16 c.u. ÷ 30 per/wk =	.5
	Accounting	11th (1st Semester)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.2
	Accounting for Management	11th (2nd Semester)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.2

ROOM TYPE/USE	COURSE	GRADE	# OF SECTIONS	FREQUENCY OF USE	AVAILABILITY	OCCUPANCY FACTOR
	Business Law	11th (Both Semesters)	3@	3 per/wk =	9 c.u. ÷ 30 per/wk =	.3
	Career Education Seminar	11th (Both Semesters)	5@	2 per/wk =	10 c.u. ÷ 30 per/wk =	.3
	Introduction to Management	11th (2nd Semester)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
	Math of Finance	11th (Both Semesters)	1@	5 per/wk =	5 c.u. ÷ 30 per/wk =	.2
	Financial Operations	11th (1st Semester)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
	Banking Management	11th (2nd Semester)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
	Principles of Economics	11th (Both Semesters)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
	Math of Computer Science	11th (Both Semesters)	1@	5 per/wk =	5 c.u. ÷ 30 per/wk =	.2
	Advertising & Sales	11th (Both Semesters)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1

ROOM TYPE/USE	COURSE	GRADE	# OF SECTIONS	FREQUENCY OF USE	AVAILABILITY	OCCUPANCY FACTOR
	Business Organization and Management	11th (1st Semester)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
	Consumerism	11th (2nd Semester)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
	Shorthand & Transcription	11th (Both Semesters)	1@	8 per/wk =	8 c.u. ÷ 30 per/wk =	.3
	Office Systems & Procedures	11th (Both Semesters)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1
(B.)	TYPING ROOM					
	Typing I	9th (Both Semesters)	@75 3@	4 per/wk =	12 c.u. ÷ 30 per/wk =	.4
			@100 4@	4 per/wk =	16 c.u. ÷ 30 per/wk =	.5
			@150 6@	4 per/wk =	24 c.u. ÷ 30 per/wk =	.8
	Typing I	10th (Both Semesters)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1

ROOM TYPE/USE	COURSE	GRADE	# OF SECTIONS	FREQUENCY OF USE	AVAILABILITY	OCCUPANCY FACTOR
	Typing II	10th (Both Semesters)	@75 3@	4 per/wk =	12 c.u. ÷ 30 per/wk =	.4
			@100 4@	4 per/wk =	16 c.u. ÷ 30 per/wk =	.5
			@150 6@	4 per/wk =	24 c.u. ÷ 30 per/wk =	.8
	Typing III	11th (Both Semesters)	1@	4 per/wk =	4 c.u. ÷ 30 per/wk =	.1

UTILIZATION PLAN

	FIRST YEAR 78-79		SECOND YEAR 79-80		THIRD YEAR 80-81		FOURTH YEAR & BEYOND	
SPACE DESCRIPTION/GRADE	FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
Interchangeable Room 9th	1.8	1.8	2.4	2.4	3.6	3.6		
Interchangeable Room 10th	0	0	2.5	2.4	2.5	2.4		
Interchangeable Room 11th	0	0	0	0	3.7	3.8		
Interchangeable Room 12th	0	0	0	0	0	0		
TOTAL Interchangeable Classroom	1.8 2 spaces	1.8 2 spaces	4.9 5 spaces	4.8 5 spaces	9.8 10 spaces	9.8 10 spaces		
Typing Room 9th	.4	.4	.5	.5	.8	.8	.8	.8
Typing Room 10th	0	0	.5	.5	.6	.6	.9	.9
Typing Room 11th	0	0	0	0	.1	.1	.1	.1
Typing Room 12th	-	-	-	-	-	-	-	-
TOTAL Typing Room	.4 1 space	.4 1 space	1.0 1 space	1.0 1 space	1.5 2 spaces	1.5 2 spaces	1.8 2 spaces	1.8 2 spaces

I. GENERAL BUILDING DATA

A. Location
B. Year Constructed
C. Enrollment & Capacity
D. Site:

1. Size
2. Utilization

- Parking
- Playfield
- Building

E. Building Characteristics

1. Number of floors
2. Type of construction

Type 1 fire proof

1a. 1b.

Type 2 non-combustible

2a. 2b. 2c.

Type 3 exterior masonry walls

3a. 3b. 3c.

Type 4 frame

4a. 4b.

3. Detailed area statistic

- Instructional
- Auxiliary instructional

4. Service systems

- Heating
- Ventilation
- Communications

II. INFORMATION CONCERNING PHYSICAL CHARACTERISTICS OF INDIVIDUAL SPACES

A. Location - within structure, floor, exposure, distance from entrances and other operational elements. Degree of isolation from disruptive activity areas.

B. Present use - instructional/specific service/type and capacity if relevant.

C. Physical conditions:

1. Natural light - ratio of window area to room area, exposure.
2. Physical condition of space - finishes, equipment.
3. Type of equipment - fixed/movable.
4. Chalk board/tack board - location and amount.
5. Light - type, number of fixtures, spacing height above floor.
6. Ventilation - source, type of equipment.
7. Intercom/clock.
8. Special utility services.
9. Audio visual capability.
10. Electrical - distribution of outlets.
11. Means of egress.
12. Approximate dimensions of room - length, width, ceiling height.
13. Fenestration - as a percentage of exterior wall area.

Law and Government

The conversion of the conceptual aspects of the curriculum into definitive space requirements is based on the proposed curriculum in Law and Government. In addition to the curriculum, a number of other issues have been included as basic parameters in the determination of the future facility requirements.

Statement of Assumptions:

A. Enrollment - The initial entry level of enrollment is expected to be 25-35 students drawn mostly from the 9th grade class. With increased interest in the program, the level of participation is expected to expand. For the purpose of this analysis, the rate of enrollment growth has been established as 50% per year. The ultimate size of the program will naturally be determined by a combination of student demand and the capacity of available facilities and staff. If the level of entering students stabilizes at 100, the program could eventually reach a combined enrollment of 400. However, this is speculative and based on a long range projection (7 years) which is not particularly useful in assessing the immediate facilities needs. Therefore, the enrollment projections and compensation for enrollment growth have been confined to a four year period commencing September '78 and concluding with June 1982 resulting in a total student population of 258.

Example:

1978 fall semester, 9th grade entering class of 30 students. The 10th grade class (originally 30 students) will be joined by 10-15 transfers resulting in a total of 45 students. 1979 fall semester, 9th grade entering class of 45 students. The 10th grade class (originally 30 students) will be joined by 10-15 transfers resulting in a total of 45 students. 1980 fall semester, 9th grade entering class of 68 students. 10th grade 45 students. 11th grade 45 students. 1981 fall semester, 9th grade entering class 100 students. 10th grade 68 students. 11th grade 45 students. 12th grade 45 students.

B. Program Identity - As with the other magnet programs, it is felt that it is desirable for the magnet program to maintain a high level of identity, a goal which can be achieved by both organizational and physical means. Organizationally, an attempt has been made to orient required secondary courses such as English, Social Studies, etc. to meet the specialized needs of the program. Physically, it has been assumed that, wherever possible, instruction will take place within a collection of spaces in a predefined area of the building even if the teaching staff must be drawn from other departments.

There are, however, a number of courses listed in the Law curriculum which are expected to be offered by other departments and allocation of instructional space within the law and government area is not believed elsewhere in the system and the numerical requirements for these courses has not been included in the law and government analysis. Those courses are as follows:

Math
General Science / Biology
P. E. Health
Introduction to Accounting / Business Law
Physics / Chemistry
Accounting / Introduction to Management
Language
Statistic / Introduction to data computer processing.

Program Requirements

The development of spatial requirements incorporates three levels of analysis which lead to the ultimate estimation of the needs for instructional space. These are:

1. General Analysis of the program
   An overview of the relationships between curriculum and physical requirements.

2. Level of utilization
   The next step in the process involves the analysis of the utilization of each type of space, given that it is expected to be available for use for a set number of periods per week. This portion of the study also focuses attention on the changes which could occur in the demand for a particular type of space during the first three or four years that the program is being implemented.

3. Summary of space requirements
   The last section of the analysis is a summary which graphically displays the requirements for the different types of instructional space that have been identified in the first portion of the report.

General Analysis of Program Activities

A general survey of all program activities has been conducted to determine the basic characteristics of the instructional spaces in which the curriculum is to be housed. It has been concluded that the curriculum will require four basic types of instructional spaces in its operation which are as follows:

a. interchangeable classroom
b. seminar space
c. courtroom or council chambers simulation
d. group assembly space

The following descriptions have been developed as preliminary statements of the physical standard (in terms of space and equipment) which should be met in order to effectively implement the law and government program.

A. Interchangeable Classroom (Classroom Unit, Description)

Requirement for standard instructional space that is possibly of interchangeable nature. No specialized equipment is foreseen with the exception that an eventual need is seen for one or more spaces equipped with tables and chairs as a substitute for standard desks. Space should be capable of accommodating 25-30 students with 800 square feet of usable floor space.

Additional Requirements:

- Chalkboard located along front and side of room.
- Minimum of 18-24 lineal feet of tack board.
- Chart rail above chalk board.
- Combination wardrobe and supply closet.
- Adjustable book shelves.
- Teacher's desk and chair.
- Filing cabinet.
- Peg board display area.
- Storage for large objects, such as charts and displays.
- Program clock, fire alarm, and combination public address/intercom system.
- Ceiling hung motion picture screen.
- Conduit/connection for closed circuit television.
- Duplex electrical outlets on front and rear walls.
- Black out shades.
- Minimum light level 25 foot candles.

B. Seminar Space

A number of courses are expected to emphasis a seminar environment in which the group size is kept to allowable minimums. Assuming an optimum group size of 12-15 students, approximately 325 square feet of space would be required for this purpose, based on State Department of Education standard of 25 S.F. per student.

Additional Requirements:

- Chalkboard
- Tack board
- Supply closet
- Tables and chairs (permitting grouped configuration)
- Program clock, fire alarm, and communcations system
- Minimum light level of 25 foot candles

C. Court Room Simulation

Requirement for a space suitably equipped to simulate the appearance of a court room or council chambers. The principal need is for furnishing which approximate a judges bench, witness chair, jury box etc.

D. Group Assembly Area

Requirement for a group meeting area capable of accommodating an entire class of 100 students. Initial requirement much less as group size is much smaller.

Area to be used for presentations and guest speakers.

Additional Requirements:

- Motion picture screen
- Auditorium seating or movable chairs
- Black out capability
- P.A. system

Level of Utilization

Each course listed in the curriculum outline is expected to be conducted in one or more of the four basic instructional spaces as described above. The level at which these spaces are utilized is dependent on a three primary variables which have been quantified in the following tables. First is the number of sections or groups which is a product of the projected enrollment and the optimum group size. Normally, the optimum size for interchangeable classrooms is 25 to 30 students while smaller groups of 12-15 are best suited for seminar classes. Second is the frequency and duration of use. When the number of sections is multiplied by the frequency of class meetings, (for example 5 periods per week) a number is produced which represents the scheduled demand that a stated course has on a particular type of instructional space. Finally, to convert this to numbers of spaces, or fractions thereof, the total demand is divided by the number of time units that the space is available. For most instances, this is 30 periods per week.

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1978

TYPE OF SPACE INTERCHANGEABLE CLASS ROOM

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.
9	English	30	30	1	5
9	Western Civ.	30	30	1	5
9	Exploratory Modules	30	30	1	4

TOTAL DEMAND	14 hrs.
AVAILABILITY OF SPACE (HRS./WK)	30 hrs.
NUMBER OF SPACES REQUIRED	0.5

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1979

TYPE OF SPACE INTERCHANGEABLE CLASS ROOM

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.
9	English	30	30	1	5
9	Western Civ.	30	30	1	5
9	Exploratory Modules	30	30	1	4

TOTAL DEMAND	14hrs.
AVAILABILITY OF SPACE (HRS./WK)	30 hrs.
NUMBER OF SPACES REQUIRED	0.5

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1979

TYPE OF SPACE INTERCHANGEABLE CLASS ROOM

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	English	45	25	2	5	10
9	Western Civ.	45	25	2	5	10
9	Exploratory Modules	45	25	2	4	8
10	American Civ.	45	25	2	7	14
10	Topics of Interest	45	25	2	4	8
10	Elective	45	25	2	5	10

TOTAL DEMAND	60
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	2.0

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1980

TYPE OF SPACE INTERCHANGEABLE CLASSROOM

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	English	45	25	2	5	10
9	Western Civ.	45	25	2	5	10
9	Exploratory Modules	45	25	2	4	8
10	American Civ.	45	25	2	7	14
10	Topics of Interest	45	25	2	4	8
10	Elective	45	25	2	5	10

TOTAL DEMAND	60
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	2.0

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1980

TYPE OF SPACE INTERCHANGEABLE CLASS ROOM

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	English	68	25	3	5	15
9	Western Civ.	68	25	3	5	15
9	Exploratory Modules	68	25	3	4	12
10	American Civ.	45	25	2	7	14
10	Topics of Interest	45	25	2	4	8
10	Elective	45	25	2	5	10
11	American Civ. II	45	25	2	5	10
11	Civil Law	45	25	2	2½	5
11	Role Playing in Gov. & Law	45	25	2	3	6
11	Contemporary Social Issues	45	25	2	2½	5
11	Electives Civil Law	15	25	1	2½	2½

TOTAL DEMAND	102.5
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	3.4

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1981

TYPE OF SPACE INTERCHANGEABLE CLASS ROOM

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	English	68	25	3	5	15
9	Western Civ.	68	25	3	5	15
9	Exploratory Modules	68	25	3	4	12
10	American Civ.	45	25	2	7	14
10	Topics of Interest	45	25	2	4	8
10	Elective	45	25	2	5	10
11	American Civ. II	45	25	2	5	10
11	Constitutional Law	45	25	2	2½	5
11	Role Playing in Gov. & Law	45	25	2	3	6
11	Civil Liberties	45	25	2	2½	5
11	Elective Civil Law	15	25	1	2½	2½

TOTAL DEMAND	102.5
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	3.4

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1981

TYPE OF SPACE INTERCHANGEABLE CLASS ROOM

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	English	100	25	4	5	20
9	Western Civ.	100	25	4	5	20
9	Exploratory Modules	100	25	4	4	16
10	American Civ.	68	25	3	7	21
10	Topics of Interest	68	25	3	4	12
10	Elective	68	25	3	5	15
11	American Civ. II	45	25	2	5	10
11	Civil Law	45	25	2	2½	5
11	Role Playing in Gov. & Law	45	25	2	3	6
11	Contemporary Social Issues	45	25	2	2½	5
12	Action Projects	25	25	1	5	5
12	R.I. History	45	25	2	5	10
12	Domestic Law	45	25	2	5	10
12	Women & the Law	45	25	2	5	10

TOTAL DEMAND	165
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	5.5

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1982

TYPE OF SPACE INTERCHANGEABLE CLASS ROOM

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	English	100	25	4	5	20
9	Western Civ.	100	25	4	5	20
9	Exploratory Modules	100	25	4	4	16
10	American Civ.	68	25	3	7	21
10	Topics of Interest	68	25	3	4	12
10	Elective	68	25	3	5	15
11	American Civ. II	45	25	2	5	10
11	Constitutional Law	45	25	2	2½	5
11	Role Playing in Gov. & Law	45	25	2	3	6
11	Civil Liberties	45	25	2	2½	5
12	Action Projects	25	25	1	5	5
12	R.I. Laws	45	25	2	5	10
12	Comparative Government	45	25	2	5	10
12	International Law	45	25	2	5	10

TOTAL DEMAND	165
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	5.5

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1978

TYPE OF SPACE COURT ROOM SIMULATION

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Western Civ.	30	30	1	1/2	5
9	Exploratory Modules	30	30	1	4	4.0

TOTAL DEMAND	4.5
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.15

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1979

TYPE OF SPACE COURT ROOM SIMULATION

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Western Civ.	30	30	1	1/2	.5
9	Exploratory Modules	30	30	1	4	4.0

TOTAL DEMAND	4.5
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.15

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1979

TYPE OF SPACE COURT ROOM SIMULATION

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Western Civ.	45	25	2	1/2	1
9	Exploratory Modules	45	25	2	4	8
10	American Civ.	45	25	2	2	4

TOTAL DEMAND	13
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.43

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1980

TYPE OF SPACE COURT ROOM SIMULATION

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Western Civ.	45	25	2	1/2	1
9	Exploratory Modules	45	25	2	4	8
10	American Civ.	45	25	2	2	4

TOTAL DEMAND	13
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.43

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1980

TYPE OF SPACE COURT ROOM SIMULATION

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Western Civ.	68	25	3	1/2	1.5
9	Exploratory Modules	68	25	3	4	12
10	American Civ	45	25	2	2	4
11	American Civ. II	45	25	2	1	2
11	Civil Law	45	25	2	5	10

TOTAL DEMAND	29.5
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.98

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1981

TYPE OF SPACE COURT ROOM SIMULATION

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Western Civ.	68	25	3	1/2	1.5
9	Exploratory Modules	68	25	3	4	12
10	American Civ.	45	25	2	2	4
11	American Civ. II	45	25	2	1	2
11	Civil Law	45	25	2	5	10
11	Civil Liberties	45	25	2	2½	5

TOTAL DEMAND	34.5
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	1.15

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1981

TYPE OF SPACE COURT ROOM SIMULATION

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Western Civ.	100	25	4	1/2	2
9	Exploratory Modules	100	25	4	4	16
10	American Civ.	68	25	3	2	6
11	American Civ. II	45	25	2	1	2
11	Civil Law	45	25	2	5	10
12	R.I. History & Laws	25	25	1	1	1
12	Women & the Law	25	25	1	1	1

TOTAL DEMAND 38

AVAILABILITY OF SPACE (HRS./WK) 30

NUMBER OF SPACES REQUIRED 1.26

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1982

TYPE OF SPACE COURT ROOM SIMULATION

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Western Civ.	100	25	4	1/2	2
9	Exploratory Modules	100	25	4	4	16
10	American Civ.	68	25	3	2	6
11	American Civ.II	45	25	2	1	2
11	Civil Law	45	25	2	5	10
12	R.I. History & Laws	25	25	1	1	1
12	International Law	25	25	1	1	1

TOTAL DEMAND	38
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	1.26

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1978

TYPE OF SPACE SEMINAR

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	30	15	2	1/2	1.0

TOTAL DEMAND	1.0
AVAILABILITY OF SPACE (HRS./WK)	30.0
NUMBER OF SPACES REQUIRED	.04

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1979

TYPE OF SPACE SEMINAR

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	30	15	2	1/2	1.0

TOTAL DEMAND	1.0
AVAILABILITY OF SPACE (HRS./WK)	30.0
NUMBER OF SPACES REQUIRED	.04

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1979

TYPE OF SPACE SEMINAR

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	45	15	3	1/2	1.5
10	Topics of Interest	45	15	3	1/2	1.5
10	Career Development Seminar	45	15	3	1	3

TOTAL DEMAND	6
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.2

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1980

TYPE OF SPACE SEMINAR

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	45	15	3	1/2	1.5
10	Topics of Interest	45	15	3	1/2	1.5
10	Career Development Seminar	45	15	3	1	3

TOTAL DEMAND	6
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.2

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1980

TYPE OF SPACE SEMINAR

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	68	15	4	1/2	2
10	Topics of Interest	45	15	3	1/2	1.5
10	Career Development Seminar	45	15	3	1	3
11	Role Playing in Gov. & Law	45	15	3	1/2	1.5

TOTAL DEMAND	8
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.27

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1981

TYPE OF SPACE SEMINAR

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	68	15	4	1/2	2
10	Topics of Interest	45	15	3	1/2	1.5
10	Career Development Seminar	45	15	3	1	3
11	Role Playing in Gov. & Law	45	15	3	1/2	1.5

TOTAL DEMAND	8
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.27

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1981

TYPE OF SPACE SEMINAR

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	100	15	6	1/2	3
10	Topics of Interest	68	15	4	1/2	2
10	Career Development Seminar	68	15	4	1	4
11	Role Playing in Gov. & Law	45	15	3	1/2	1.5

TOTAL DEMAND	10.5
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.35

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1982

TYPE OF SPACE SEMINAR

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	100	15	6	1/2	3
10	Topics of Interest	68	15	4	1/2	2
10	Career Development Seminar	68	15	4	1	4
11	Role Playing In Gov. & Law	45	15	3	1/2	1.5

TOTAL DEMAND	10.5
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.35

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1978

TYPE OF SPACE GROUP ASSEMBLY

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	30	30	1	3	3

TOTAL DEMAND	3
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.1

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1979

TYPE OF SPACE GROUP ASSEMBLY

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	30	30	1	3	3

TOTAL DEMAND	3
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.1

ANALYSIS OF ROOM REQUIREMENTS FOR FALL SEMESTER 1979

TYPE OF SPACE GROUP ASSEMBLY

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	45	45	1	3	3

TOTAL DEMAND	3
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.1

ANALYSIS OF ROOM REQUIREMENTS FOR SPRING SEMESTER 1980

TYPE OF SPACE GROUP ASSEMBLY

GRADE	COURSE	ENROLLMENT	GROUP SIZE	# OF SECTIONS	DEMAND HR/WK.	
9	Career Exploration	45	45	1	3	3

TOTAL DEMAND	3
AVAILABILITY OF SPACE (HRS./WK)	30
NUMBER OF SPACES REQUIRED	0.1

SUMMARY OF SPACE REQUIREMENTS

The utilization analysis produced the following levels of demand for each of the instructional spaces. In most instances, the computations resulted in numerical requirements which are often expressed as fractions of spaces. These have been subsequently stated as nominal requirements using the next largest whole number. For example, an actual requirement for 3.4 interchangeable classrooms has been interpreted as need for 4 spaces.

(Actual Req.)	78-79	79-80	80-81	81-82
Interchangeable Classroom	1 (.5)	2 (2.0)	4 (3.4)	6 (5.5)
Court Room Simulation	1 (.15)	1 (.43)	1 (.98)	2 (1.26)
Seminar Space	1 (.04)	1 (.2)	1 (.27)	1 (.35)
Group Assembly	1 (.1)	1 (.1)	1 (.1)	1 (.1)

As illustrated in the preceding table, the spatial requirements for the law program increase in direct proportion to the growth in enrollment. However, the analysis also demonstrates that the numerical demand for instructional space, particularly in the first two years of implementation, may not justify the operation of all four types of instructional space. At issue is the realization that spaces intended for exclusive use as court room simulation and seminar groups are not expected to be used with sufficient frequency resulting in their being vacant approximately 50 to 75 percent of the time. Similarly, the need for a group assembly space is questionable considering the initial expected enrollment.

The basic conclusion is that the classroom requirements for the first academic year ('78 - '79) can be met with the allocation of one interchangeable classroom. This approach would require that the space be multi purpose in nature with any specialized requirements, such as court simulation, provided by movable fixtures and equipment.

The second year of operation (79-80) will place a much higher demand on instructional space. The increase in enrollment caused by operating both 9th and 10th grade courses will require at least two interchangeable classrooms for general instruction. The need

for a simulated court room and seminar space will continue to fall short of justifying separate spaces for these purposes and their combination into one space would seem like a more workable solution. Group assemblies, on the other hand, will probably exceed the capacity of a standard classroom and the program should expect to rely on scheduling these group meetings in larger areas in the building such as the auditorum, cafeteria, or study hall.

The third year of operation (80-81) will require four interchangeable classrooms for general instruction. Also by the third year, the demand for a simulated court room will require an individual space that is likely to be operating at or near its capacity of 30 periods per week. While it would appear that the level of demand for seminar space is still inadequate for the allocation of an additional space it is expected that at times, three seminar sessions will occur simultaneously resulting in occasional peak loads that will be difficult to accommodate without at least one additional space.

The fourth year of operation will raise the requirements for general instructional space to six plus one additional space for seminar sessions. At this point a problem has been observed in that activities requiring court room simulation will probably exceed the capacity of a single simulation area. While it is certainly premature to establish the exact demand levels it would appear that some concessions in the curriculum may be required if the demand for a simulation workshop are to be kept within the constraints of 30 available periods per week.

Summary of recommendated allocation of spaces.

	78-79	79-80	80-81	81-82
Interchangeable Classroom	1	2	4	6
Court Room Simulation	0	1	1	1
Seminar Space	0	0	1	1